

CLAIMS:

1. An electrophoretic display unit (1,100) comprising:
 - an electrophoretic display panel (60) comprising selection electrodes (41,42,43) and data electrodes (31, 32, 33, 34), a crossing of a selection electrode (41, 42, 43) and a data electrode (31, 32, 33, 34) being associated with a pixel (11);
 - 5 - data driving circuitry (30,70) for supplying a first and second data pulse (DP1,DP2) to the data electrodes (31,32,33,34);
 - selection driving circuitry (40) for supplying a first (SP1) and a second selection pulse (SP2) to respective selection electrodes (41, 42, 43); and
 - a controller (20) for controlling switching circuitry (50) for coupling a data electrode
 - 10 (31,32,33,34) to a voltage reference source (REF) after an end (T1) of the first selection pulse (SP1) and before an end (T2) of a subsequent second selection pulse (SP2), with a reference voltage of the voltage reference source (REF) having a value between extreme voltage values of the first and the second data pulses (DP1,DP2).
- 15 2. An electrophoretic display unit (1,100) as claimed in claim 1, wherein the reference voltage corresponds with ground level.
3. An electrophoretic display unit (1,100) as claimed in claim 1, wherein the controller (20) is adapted to control the switching circuitry (50) for coupling the data
- 20 electrode (31,32,33,34) to the voltage reference source (REF) after the end (T1) of the first selection pulse (SP1) and before a start of the second selection pulse (SP2).
4. An electrophoretic display unit (1,100) as claimed in claim 1, wherein the controller (20) is adapted to control the data driving circuitry (30,70) to provide:
 - 25 - shaking data pulses (Sh₁,Sh₂);
 - one or more reset data pulses (R); and
 - one or more driving data pulses (Dr);via the data electrodes (31,32,33,34) to the pixels (11).

5. An electrophoretic display unit (1,100) as claimed in claim 1, wherein the controller (20) is adapted to control the switching circuitry (50) for coupling the data electrode (31,32,33,34) to the voltage reference source (REF) if the first and the second data pulses (DP1,DP2) have amplitudes of opposite polarity, a timing of the first and second data pulses (DP1,DP2) corresponding with a timing of the first (SP1) and second selection pulse (SP2), respectively.
6. An electrophoretic display unit (1,100) as claimed in claim 5, further comprising a memory coupled to the controller (20) for storing information about the amplitudes of the first and second data pulses (DP1,DP2).
7. An electrophoretic display unit (1,100) as claimed in claim 1, wherein the switching circuitry (50) coupled to the data driving circuitry (30) and the switching elements (12).
8. Data driving circuitry (70) for use in an electrophoretic display unit (1,100) as claimed in claim 1, wherein the switching circuitry (50) forms part of the data driving circuitry (70).
9. A display device comprising an electrophoretic display unit (1,100) as claimed in claim 1; and a storage medium for storing information to be displayed.
10. A method for driving an electrophoretic display unit (1,100) comprising an electrophoretic display panel (60) comprising selection electrodes (41,42,43) and data electrodes (31, 32, 33, 34), a crossing of a selection electrode (41, 42, 43) and a data electrode (31, 32, 33, 34) being associated with a pixel (11), the method comprising the steps of:
- supplying data pulses (DP1,DP2) to the pixels (11) via the data electrodes (31,32,33,34); and
 - supplying a first (SP1) and a second selection pulse (SP2) to respective selection electrodes (41, 42, 43); and
 - controlling switching circuitry (50) for coupling a data electrode (31,32,33,34) to a voltage reference source (REF) after an end (T1) of the first selection pulse (SP1) and before an end (T2) of the subsequent second selection pulse (SP2), with a reference voltage of the voltage

reference source (REF) having a value between extreme voltage values of the data pulses (DP1,DP2).

11. A computer program product for driving an electrophoretic display unit
- 5 (1,100) comprising an electrophoretic display panel (60) comprising selection electrodes (41,42,43) and data electrodes (31, 32, 33, 34), a crossing of a selection electrode (41, 42, 43) and a data electrode (31, 32, 33, 34) being associated with a pixel (11), the product comprising the functions of:
- supplying data pulses (DP1,DP2) to the pixels (11) via the data electrodes (31,32,33,34);
 - 10 - supplying a first (SP1) and a second selection pulse (SP2) to respective selection electrodes (41, 42, 43); and
 - controlling switching circuitry (50) for coupling a data electrode (31,32,33,34) to a voltage reference source (REF) after an end (T1) of the first selection pulse (SP1) and before an end (T2) of the subsequent second selection pulse (SP2), with a reference voltage of the voltage
 - 15 reference source (REF) having a value between extreme voltage values of the data pulses (DP1,DP2).